

Notice of Allowability

Application No.

10/617,596

Applicant(s)

OSBORN, JOHN J.

Examiner

Tom V. Sheng

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed on 3/6/2006.
2. ☒ The allowed claim(s) is/are 1-5 and 8-27.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: ____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date ____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date ____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date ____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other ____. |

Allowable Subject Matter

1. Claims 1-5 and 8-27 are allowed.
2. The following is an examiner's statement of reasons for allowance:

The invention is directed to an input device having a manipulable control element that enables the user control of a computer cursor and emulation of mouse clicks. The control element is movable relative to a surface having dynamic coefficients of friction that reduces false double-clicks. A reflective surface is coupled to the control element via a pantograph and corresponding movement of the reflective surface is detectable by at least one stationary light transmitter and light detector.

Independent claim 1 identifies the uniquely distinct features "a reflective element coupled for movement along an x-axis and a y-axis of said x-y plane responsive to movement of said single control element in said x-y plane; at least one stationary light transmitter disposed to direct light upon said reflective element; and at least one stationary light detector disposed to detect light from said at least one stationary light transmitter reflected by said reflective element."

Independent claim 17 identifies the uniquely distinct features "a reflective element coupled to said second end of said pantographic mechanism for movement along an x-axis and a y-axis of said x-y plane responsive to movement of said single control element; at least one stationary light transmitter disposed to direct light upon said reflective element; at least one stationary light detector disposed to detect light from said light transmitter reflected by said reflective element; means coupled to said at

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least one stationary light detector for outputting a computer recognizable signal responsive to detected movement of said single control element on said x-y plane."

Independent claim 23 identifies the uniquely distinct features "resolving user movement of said single control element relative to said x-y plane to output a computer recognizable signal therefrom by moving a reflective element along an x-axis and a y-axis of said x-y plane responsive to movement of said single control element and by sensing movement of said reflective element using at least one stationary light transmitter to direct light upon said reflective element and using at least one stationary light detector to detect light from said at least one stationary light transmitter reflected by said reflective element, wherein movement of said single control element on said x-y plane is translated into detected movement along said x-axis and said y-axis."

Rosenberg (US 6,061,004) teaches a pantographic type interface having position sensors for tracking movement of a user-moved object relative to a pad or a surface. However, Rosenberg does not teach the use of a coupled reflective element and stationary light transmitter and detector, for determining the movement of the control element along an x-y plane, as claimed.

De Gotari (US 6,084,571) teaches a position or cursor input device having two deflectable laminar springs with stationary optical sensors. The deflections of either one or both of the laminar springs are transformed into a signal suitable for control of a position of a cursor. However, De Gotari does not teach the use of a coupled reflective element and stationary light transmitter and detector, for determining the movement of the control element along an x-y plane, as claimed.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom V. Sheng whose telephone number is (571) 272-7684. The examiner can normally be reached on 9:00am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amr Awad can be reached on (571) 272-7764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tom Sheng
May 18, 2006

AMR A. AWAD
PRIMARY EXAMINER
